

## Patent claims

1. Method for an x-ray arrangement for compensation of scattered radiation, which x-ray arrangement comprises two x-ray systems (1, 2) with respectively one  
5 x-ray source (4, 6) and one x-ray detector (5, 7), in that
  - for at least one of the two x-ray systems (1, 2), in a definite position of the x-ray systems (1, 2) relative to one another, an x-ray scattered radiation image based on x-ray radiation (11) scattered on a subject (P) is acquired, whereby the subject (P) is irradiated with the x-ray source (4, 6) of one x-  
10 ray system (1, 2) and the x-ray scattered radiation image based on the x-ray radiation scattered on the subject (P) is acquired with the x-ray detector (5, 7) of the other x-ray system (1, 2), whose x-ray source (4, 6) is not operated during the operation of the x-ray source (4, 6) of the x-ray system (1, 2),
  - the acquired x-ray scattered radiation image is saved, and
  - 15 - the saved x-ray scattered radiation image is subtracted from an x-ray image acquired with the other x-ray system (1, 2).
2. Method according to claim 1, in that an x-ray scattered radiation image is acquired and saved under defined exposure parameters for an x-ray system (1, 2),  
20 whereby, given a change of the x-ray dose for the acquisition of an x-ray image with the x-ray system (1, 2), the acquired and saved x-ray scattered radiation image is scaled for the subtraction corresponding to the change of the x-ray dose.
3. Method according to claim 1 or 2, in that the x-ray scattered radiation  
25 image used for an x-ray system (1, 2) for subtraction is determined such that a plurality of x-ray scattered radiation images are acquired for the x-ray system (1, 2) and averaged over the acquired x-ray scattered radiation images.
4. X-ray apparatus comprising two x-ray systems (1, 2) respectively  
30 comprising an x-ray source (4, 6) and an x-ray detector (5, 7), a storage (9) as well as a computer (8) which controls the x-ray systems (1, 2) such that

- an x-ray scattered radiation image based on x-ray radiation scattered on a subject (P) is acquired for at least one of the two x-ray systems (1, 2) at a definite position of the x-ray systems (1, 2) relative to one another, whereby the subject (P) is irradiated with the x-ray source (4, 6) of one x-ray system (1, 2), and an x-ray scattered radiation image based on the x-ray radiation scattered on the subject (P) is acquired with the x-ray detector (5, 7) of the other detector (5, 7) of the other x-ray system (1, 2), whose x-ray source (4, 6) is not operated during the operation of the x-ray source (4, 6) of the one x-ray system (1, 2),
- 10 - the acquired x-ray scattered radiation image is stored in the storage (9), and
- that the saved x-ray scattered radiation image is subtracted from an x-ray image acquired with the other x-ray system (1, 2).

5. X-ray apparatus according to claim 4, in that an x-ray scattered radiation image is acquired and stored in a storage (9) under defined exposure conditions for an x-ray system (1, 2), whereby, given a change of the x-ray dose for the acquisition of an x-ray image with the x-ray system (1, 2), the acquired and saved x-ray scattered radiation image is scaled for subtraction corresponding to the change of the x-ray dose.

20

6. X-ray apparatus according to claim 4 or 5, in that the x-ray scattered radiation image to be used for subtraction for an x-ray system (1, 2) is determined such that a plurality of x-ray scattered radiation images are acquired for the x-ray system (1, 2) and averaged over the acquired x-ray scattered radiation images.

25